APPENDIX

From Corn to Popcorn ?

Urbanization and food consumption in sub-Sahara Africa: Evidence from rural-urban migrants in Tanzania

Appendix A: Variables

Table A1: Food categories

Food category	Food items
Maize	Maize (green, cob) Maize (grain) Maize (flour)
Cassava	Cassava fresh Cassava dry/flour
Other starchy foods	Millet and sorghum (grain) Millet and sorghum (flour) Wheat, barley grain and other cereals Sweet potatoes Cooking bananas, plantains Yams/cocoyams Irish potatoes Other roots and tubers
Rice	Rice (paddy) Rice (husked)
Bread, pasta, cereal products	Bread Macaroni, spaghetti Other cereal products
Pulses, nuts and seeds	Peas, beans, lentils and other pulses Groundnuts in shell/shelled Coconuts (mature/immature) Cashew, almonds and other nuts Seeds and products from nuts/seeds (excl. cooking oil)
Meat, fish and dairy	Goat meat Beef including minced sausage Pork including sausages and bacon Chicken and other poultry Wild birds and insects Other domestic/wild meat products Eggs Fresh fish and seafood (including dagaa) Dried/salted/canned fish and seafood (incl. dagaa) Fresh milk Milk products (like cream, cheese, yoghurt etc.) Canned milk/milk powder
Fruits and vegetables	Ripe bananas Citrus fruits (oranges, lemon, tangerines, etc.) Mangoes, avocadoes and other fruits Sugarcane Onions, tomatoes, carrots and green pepper, other viungo Spinach, cabbage and other green vegetables Canned, dried and wild vegetables
Oils and fats	Cooking oil Butter, margarine, ghee and other fat products
Sugar and sweets	Sugar Sweets Honey, syrups, jams, marmalade, jellies, canned fruits Maandazi (donuts), cakes, biscuits Sweets, ice-cream (consumed outside home)
Sodas, tea and coffee	Tea dry Coffee and cocoa Bottled/canned soft drinks (soda, juice, water) Prepared tea, coffee Sodas and other non-alcoholic drinks (consumed outside home)
Meals and snacks consumed outside home	Full meals (breakfast, lunch or dinner) Barbecued meat, chips, roast bananas and other snacks prepared on charcoal Tea, coffee, samosa, cake and other hoteli snacks

Table A2: Food groups (used to determine diet diversity)

Food group	**Food items**
Cereals	Rice (paddy) Rice (husked) Maize (green, cob) Maize (grain) Maize (flour) Bread Macaroni, spaghetti Other cereal products Millet and sorghum (grain) Millet and sorghum (flour) Wheat, barley grain and other cereals
Roots and tubers	Cassava fresh Cassava dry/flour Sweet potatoes Cooking bananas, plantains Yams/cocoyams Irish potatoes Other roots and tubers
Sugar and sweets	Sugar Sweets Honey, syrups, jams, marmalade, jellies, canned fruits Maandazi (donuts), cakes, biscuits Sweets, ice-cream (consumed outside home)
Pulses	Peas, beans, lentils and other pulses
Nuts and seeds	Groundnuts (in shell/shelled) Coconuts (mature/immature) Cashew, almonds and other nuts Seeds and products from nuts/seeds (excl. cooking oil)
Fruits	Ripe bananas Citrus fruits (oranges, lemon, tangerines, etc.) Mangoes, avocadoes and other fruits Sugarcane
Vegetables	Onions, tomatoes, carrots and green pepper, other viungo Spinach, cabbage and other green vegetables Canned, dried and wild vegetables
Meat, fish and eggs	Goat meat Beef including minced sausage Pork including sausages and bacon Chicken and other poultry Wild birds and insects Other domestic/wild meat products Eggs Fresh fish and seafood Dried/salted/canned fish and seafood
Milk	Fresh milk Milk products (like cream, cheese, yoghurt etc.) Canned milk/milk powder
Oils and fats	Cooking oil Butter, margarine, ghee and other fat products
Sodas, tea and coffee	Tea dry Coffee and cocoa Bottled/canned soft drinks (soda, juice, water) Prepared tea, coffee Sodas and other non-alcoholic drinks (consumed outside home)
Meals and snacks consumed outside home	Full meals (breakfast, lunch or dinner) Barbecued meat, chips, roast bananas and other snacks prepared on charcoal Tea, coffee, samosa, cake and other hoteli snacks

Table A3: Independent variables

M^{Rural}	Migration to different rural area Dummy variable equal to one when in 2012/13 individual was found to reside in a household in a different and distant (>1hour drive) rural (as defined by the 2002 Census classification) area than during the 2008/09 round.
M^{Urban}	Migration to urban area Dummy variable equal to one when in 2012/13 individual was found to reside in a distant (> 1hour drive) urban (as defined by the 2002 Census classification) household.
$M^{Sec.\ Towns}$	Migration to secondary town Dummy variable equal to one when in 2012/13 individual was found to reside in a distant (> 1hour drive) urban (as defined by the 2002 Census classification) household outside of Dar es Salaam or the Ilemela or Nyamanga districts in Mwanza.
M^{Cities}	Migration to city Dummy variable equal to one when in 2012/13 individual was found to reside in a distant (> 1hour drive) urban (as defined by the 2002 Census classification) household in Dar es Salaam or the Ilemela or Nyamanga districts in Mwanza.
$M^{Rural\ (before\ 2010/11)}$	Migration to different rural area before 2010/11 Interaction term of dummy variable M^{Rural} with a dummy variable equal to one if the individual migrated in the period 2008/09 to 2010/11, and equal to zero if migration took place between 2010/11 and 2012/13.
$M^{Urban\ (before\ 2010/11)}$	Migration to urban area before 2010/11 Interaction term of dummy variable M^{Urban} with a dummy variable equal to one if the individual migrated in the period 2008/09 to 2010/11, and equal to zero if migration took place between 2010/11 and 2012/13.
Controls	- Age Self-reported age expressed in years - Sex 1 = male, 2 = female - Education Years of schooling derived from information on "highest grade obtained". - Relation to the household head Dummy variables for household head/spouse and child of household head. - Marital status 0= unmarried, 12 = married. Marital status was not reported for respondents below the age of 12 and therefore assumed to be zero.
ΔFarm	Transition out of farming Dummy variable that equals one when an individual who was part of a household headed by a farmer in 2008/09, resided in a non-farming household by 2012/13, be it because of the individual's relocation or because the household head switched to off-farm employment over time.
ΔLn(Cons. pc)	Income growth The difference in the logarithm of real – adjusted for – total household consumption per capita over time.
PI_{Total} PI_j	Price index For each food category j composed of a group of food items f (PI_j), as well as for the all food categories jointly (PI_{Total}), an individual-specific a Laspeyres-type price index PI_j is constructed: $PI_j = \frac{\sum_f (p_{f,2012/13} \cdot q_{f,2008/09})}{\sum_f (p_{f,2008/09} \cdot q_{f,2008/09})}$ where $q_{f,2008/09}$ is the amount of kcal consumed from food item f by the individual's household in 2008/09, $p_{f,2008/09}$ and $p_{f,2012/13}$ are the median prices of food item f in the location where the individual was residing during the baseline and endline interviews respectively. This price index weighs the price of (one kcal of) each food item in food category j by its contribution in 2008 to the total expenses of food category j in 2008/09. For migrants, this price index thus measures whether the migrant needs to pay more or less to keep the same consumption basket he or she had before migration, compared to the case in which he or she would not have migrated. For each food item, price information is derived from the reported value and amount purchased by each household. The median price is derived across all enumeration areas that are classified as rural/secondary town/city within the same region. In the case of less than 10 price observations for a food item, the median is taken at a higher level (regional, urban classification, or across the whole sample). For meals consumed outside, no price information is available. As such, no price index could be constructed, nor is this category included in the price index for total food.
Population density	Population Density expressed as 100 inhabitants/km² Each household is attributed to one of 19 ranges of people/km² based upon their GPS coordinates that were matched to the WorldPop population density map of Tanzania. This information is included in the regression by taking the arithmetic mean of the range expressed as 100 inhabitants/km². (0.25=0-50 people/km²; 0.75= 50-100 people/km²; 1.5 = 100-200 people/km²; 2.5= 200-300 people/km²; 3.5=300-400 people/km²; 4.5=400-500 people/km²; 7.5=500-1000 people/km²; 15= 1000-2000 people/km²; 25= 2000-3000 people/km²; 35= 3000-4000 people/km²;45=4000-5000 people/km²;75= 5000-10000 people/km²; 150= 10000-20000 people/km²; 250 = 20000-30000 people/km²; 300 = > 30000 people/km²)

Appendix B: Additional regression results

Table B1: Results regressions of changes in food consumption for women (2008/09-2012/13)

	Δ Total	Δ Maize	Δ Cassava	Δ Other starchy foods	Δ Rice	Δ Bread, pasta, cereal products	Δ Pulses, nuts, seeds	Δ Meat, fish, dairy	Δ Fruits, veg.	Δ Oils, fats	Δ Sugar, Sweets, pastries	Δ Sodas, tea, coffee	Δ Meals, snacks cons. outs.
Baseline	*2347.43*	*935.53*	*294.88*	*192.43*	*222.60*	*17.06*	*273.80*	*131.17*	*64.41*	*87.27*	*96.29*	*3.42*	*28.58*
M^{Rural}	-53.80	-67.82	17.51	22.60	46.12	10.47	-54.08*	-22.17	-2.105	-7.481	-3.477	0.813	5.820
	(112.1)	(70.53)	(50.25)	(20.16)	(43.31)	(9.581)	(28.99)	(14.50)	(10.73)	(9.935)	(13.09)	(2.260)	(45.99)
M^{Urban}	-10.67	-100.7	-139.7***	-121.3*	158.1**	75.96***	-24.49	36.63	-4.119	11.49	74.08***	2.245	21.19
	(206.7)	(109.1)	(53.71)	(70.04)	(69.71)	(21.15)	(47.95)	(23.25)	(14.46)	(21.77)	(25.36)	(6.269)	(53.56)
Const.	-365.2***	-189.4***	-90.77***	-26.91***	13.62	1.011	-26.49***	-16.20***	-7.193***	-53.63***	-5.361	-0.962	37.08**
	(33.90)	(19.40)	(12.89)	(9.480)	(13.76)	(2.403)	(8.002)	(3.990)	(2.620)	(2.827)	(4.163)	(0.918)	(15.70)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	4711	4711	4711	4711	4711	4711	4711	4711	4711	4711	4711	4711	4711
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	0.036	0.071	4.936**	4.241**	1.755	8.636***	0.268	4.963**	0.015	0.692	8.390***	0.040	0.045

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B2: Results regressions of changes in food consumption for men (2008/09-2012/13)

	Δ Total	Δ Maize	Δ Cassava	Δ Other starchy foods	Δ Rice	Δ Bread, pasta, cereal products	Δ Pulses, nuts, seeds	Δ Meat, fish, dairy	Δ Fruits, veg.	Δ Oils, fats	Δ Sugar, sweets, pastries	Δ Sodas, tea, coffee	ΔMeals, snacks cons. outs.
Baseline	*2409.99*	*945.77*	*271.55*	*188.02*	*243.32*	*16.10*	*273.53*	*137.79*	*65.50*	*87.89*	*98.25*	*6.38*	*84.87*
M^{Rural}	88.30	142.7	-5.527	-0.139	14.19	11.07	-16.52	-12.47	-14.19	-1.075	-7.213	7.557	-30.12
	(167.8)	(96.26)	(48.91)	(34.48)	(49.02)	(11.13)	(35.24)	(27.62)	(10.96)	(11.50)	(25.29)	(6.455)	(94.72)
M^{Urban}	165.1	-308.1**	-92.63***	-62.63**	-11.53	59.61*	-30.88	19.09	-10.13	-33.68	22.77	50.45***	562.7***
	(180.3)	(133.1)	(32.25)	(27.45)	(88.16)	(32.06)	(43.42)	(36.51)	(15.37)	(28.03)	(35.32)	(11.88)	(147.6)
Const.	-370.3***	-198.9***	-80.58***	-34.91***	24.70**	2.846	-34.73***	-18.49***	-0.246	-46.95***	-5.889	-2.107	24.96
	(37.72)	(21.83)	(9.879)	(7.249)	(10.63)	(2.938)	(6.473)	(5.438)	(4.007)	(3.254)	(4.676)	(2.013)	(23.98)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	4359	4359	4359	4359	4359	4359	4359	4359	4359	4359	4359	4359	4359
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	0.100	7.709***	2.342	2.078	0.067	2.035	0.069	0.490	0.047	1.077	0.464	10.44***	11.84***

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B3: Results regressions of changes in diet diversity on migration to different rural areas, secondary towns or cities (2008/09-2012/13)

	Δ Count (items)	Δ BI (items)	Δ Count (groups)	Δ BI (groups)
Baseline	*11.52*	*0.649*	*7.52*	*0.532*
M^{Rural}	-0.408	0.012	-0.031	-0.002
	(0.353)	(0.016)	(0.180)	(0.016)
$M^{Sec.\ Towns.}$	0.634	0.033	-0.202	-0.023
	(0.909)	(0.031)	(0.392)	(0.030)
M^{Cities}	1.973**	0.042	0.230	0.007
	(0.932)	(0.036)	(0.456)	(0.036)
Const.	-0.251**	-0.039***	0.002	-0.031***
	(0.111)	(0.005)	(0.056)	(0.005)
Controls	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓
N	9070	9070	9070	9070
F-stat. Ha: $M^{Sec.\ Towns} \neq M^{Rural}$	1.182	0.373	0.162	0.407
F-stat. Ha: $M^{Cities} \neq M^{Rural}$	5.739**	0.573	0.301	0.058
F-stat. Ha: $M^{Sec.\ Towns} \neq M^{Cities}$	1.077	0.031	0.523	0.434

Notes: Based upon food consumption in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B4: Results regressions of changes in body composition on migration to different rural areas, secondary towns or cities (2008/09-2012/13)

	Adults (> 19 years old)			Children (0 to 19 years old)		
	Δ BMI	Δ BMI (women)	Δ BMI (men)	Δ BMI for age z score	Δ BMI for age z score (girls)	Δ BMI for age z score (boys)
Baseline	*21.47*	*21.86*	*20.96*	*-0.332*	*-0.342*	*-0.320*
M^{Rural}	-0.002	-0.380	-0.057	0.402**	0.461*	-0.140
	(0.403)	(1.005)	(1.006)	(0.188)	(0.269)	(0.568)
$M^{Sec.\ Towns.}$	0.769	0.851	1.204	0.166	0.115	0.083
	(0.797)	(1.698)	(2.608)	(0.332)	(0.770)	(0.286)
M^{Cities}	1.529*	1.486	2.045	0.348	0.574	0.191
	(0.892)	(1.462)	(1.521)	(0.380)	(0.549)	(0.507)
Const.	-1.324***	-1.237**	-1.013*	-1.049***	-1.103***	-0.550***
	(0.336)	(0.626)	(0.594)	(0.111)	(0.178)	(0.167)
Controls	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓
N	3727	2117	1610	3215	1681	1534
F-stat. Ha: $M^{Sec.\ Towns} \neq M^{Rural}$	0.808	0.400	0.225	0.384	0.179	0.115
F-stat. Ha: $M^{Cities} \neq M^{Rural}$	2.655	1.230	1.310	0.017	0.037	0.202
F-stat. Ha: $M^{Sec.\ Towns} \neq M^{Cities}$	0.417	0.082	0.078	0.131	0.233	0.033

Notes: We control for individual baseline characteristics; age, (sex), relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B5: Results regressions of changes in diet diversity incl. pathways (2008/09-2012/13)

	ΔCount (items)	ΔBI (items)	ΔCount (groups)	ΔBI (groups)
Baseline	*11.52*	*0.570*	*7.52*	*0.532*
M^{Rural}	-0.539	0.009	-0.042	-0.004
	(0.338)	(0.015)	(0.171)	(0.016)
M^{Urban}	0.324	0.021	-0.110	-0.0110
	(0.678)	(0.025)	(0.301)	(0.0237)
ΔFarm	0.625*	-0.025	-0.040	-0.035**
	(0.379)	(0.016)	(0.184)	(0.016)
ΔLn(Cons. pc)	1.730***	0.061***	0.547***	0.051***
	(0.287)	(0.013)	(0.137)	(0.012)
Const.	-0.803***	-0.051***	-0.133*	-0.039***
	(0.142)	(0.007)	(0.068)	(0.006)
Controls	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓
N	8995	8995	8995	8995
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	1.409	0.175	0.043	0.063

Notes: Based upon food consumption in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B6: Results regressions of changes in body composition incl. pathways (2008/09-2012/13)

	Adults (> 19 years old)			Children (0 to 19 years old)		
	Δ BMI	Δ BMI (women)	Δ BMI (men)	Δ BMI for age z score	Δ BMI for age z score (girls)	Δ BMI for age z score (boys)
Baseline	*21.48*	*21.87*	*20.96*	*-0.332*	*-0.342*	*-0.321*
M^{Rural}	-0.047	-0.349	-0.084	0.414**	0.488*	-0.023
	(0.417)	(1.042)	(1.102)	(0.192)	(0.273)	(0.470)
M^{Urban}	0.901	1.062	1.231	0.146	0.003	0.626*
	(0.634)	(1.146)	(2.541)	(0.250)	(0.466)	(0.350)
ΔFarm	-0.049	-0.058	-0.621	-0.143	-0.032	-0.638**
	(0.324)	(0.717)	(0.990)	(0.198)	(0.314)	(0.306)
ΔLn(Cons. pc)	0.362**	0.229	0.377	0.126	0.213	-0.467
	(0.176)	(0.382)	(0.501)	(0.131)	(0.171)	(0.342)
Const.	-1.42***	-1.270*	-1.074*	-1.078***	-1.163***	-0.340
	(0.348)	(0.653)	(0.621)	(0.124)	(0.182)	(0.215)
Controls	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓
N	3693	2097	1596	3209	1676	1533
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	1.832	0.977	0.270	0.736	0.968	0.978

Notes: We control for individual baseline characteristics; age, (sex), relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B7: Results of regressions on changes in food consumption incl. pathways and longer term migration (2008/09-2012/13)

	Δ Total (at home)	Δ Maize	Δ Cassava	Δ Other starchy foods	Δ Rice	Δ Bread, pasta, cereal products	Δ Pulses, nuts, seeds	Δ Meat, fish, dairy	Δ Fruits, veg.	Δ Oils, fats	Δ Sugar, sweets, pastries[a]	Δ Sodas, tea, coffee[a]	ΔMeals, snacks cons. outs.[b]
Baseline	*2320,88*	*940.52*	*283.81*	*190.85*	*227.43*	*16.58*	*273.46*	*134.14*	*64.84*	*87.55*	*96.29*	*4.83*	*55.26*
M^{Rural}	-28.75	-31.20	-2.742	4.063	36.08	24.71***	-23.61	-34.51**	-7.937	-2.944	-24.00	0.448	-2.100
	(80.63)	(70.84)	(35.59)	(21.60)	(35.24)	(9.048)	(25.25)	(14.71)	(10.42)	(10.25)	(15.24)	(2.662)	(41.63)
$M^{Rural\ (before\ 2010/11)}$	39.09	41.81	3.161	22.18	-43.73	-30.51**	-18.65	52.85**	5.330	7.568	15.79	-1.038	4.191
	(129.6)	(97.35)	(64.61)	(32.48)	(57.76)	(11.99)	(33.85)	(22.14)	(11.74)	(12.98)	(18.48)	(3.162)	(56.51)
M^{Urban}	-552.2***	-161.4	-15.17	-99.33**	3.268	40.19**	0.536	-30.09*	-25.84*	-44.40*	-4.057	15.30***	105.1
	(173.4)	(105.4)	(56.38)	(41.47)	(58.90)	(18.11)	(42.10)	(17.72)	(13.28)	(23.97)	(26.04)	(5.467)	(84.14)
$M^{Urban(before\ 2010/11)}$	599.4**	58.64	91.38	128.1*	41.27	39.81	-0.461	63.46	42.80**	63.99**	55.86	4.834	-99.53
	(246.7)	(160.3)	(60.47)	(73.53)	(89.85)	(38.03)	(60.02)	(39.06)	(17.14)	(27.10)	(36.62)	(12.85)	(112.0)
ΔFarm	-362.3***	-167.4***	-65.02***	-21.49	65.05**	2.424	-109.2***	-14.13	-30.32***	-17.07*	24.29**	2.712	90.92**
	(76.16)	(51.48)	(24.45)	(19.60)	(27.18)	(8.958)	(20.89)	(13.96)	(7.266)	(9.833)	(12.10)	(2.118)	(38.12)
ΔLn(Cons. pc)	769.8***	196.4***	-2.360	48.53***	166.5***	22.87***	111.6***	110.0***	42.69***	22.81***	57.74***	7.773***	221.3***
	(61.33)	(32.23)	(19.81)	(12.42)	(20.53)	(4.704)	(13.20)	(9.870)	(5.834)	(5.234)	(6.539)	(1.417)	(27.01)
PI_{Total}	-484.4***	-32.84	-265.5***	4.632	10.21	4.985	-34.79	28.67	-11.20	20.68	8.657	-0.503	
	(127.2)	(103.9)	(94.37)	(32.12)	(52.67)	(12.35)	(33.28)	(23.96)	(15.19)	(18.36)	(17.20)	(4.562)	
PI_j		-258.2	-797.8***	-630.5***	-573.9***	-332.6**	-92.79	-41.96***	-47.66	-9.294**	4.828	0.338	
		(291.9)	(202.6)	(190.3)	(152.8)	(167.4)	(58.13)	(14.84)	(34.05)	(4.624)	(29.48)	(1.755)	
Const.	1702.8***	1091.1**	1715.8***	275.4**	563.4**	73.93	497.5***	78.50	145.4*	117.6**	16.66	3.811	-55.12***
	(604.4)	(475.0)	(451.5)	(131.5)	(279.7)	(73.78)	(175.0)	(99.49)	(86.02)	(54.85)	(81.40)	(26.37)	(16.86)
Controls[d]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	8995	8995	8995	8995	8995	8995	8995	8995	8995	8995	8995	8995	8995
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	7.786***	1.036	0.030	5.111**	0.234	0.586	0.234	0.038	1.097	2.375	0.465	5.708**	1.353

Notes : Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
[a] Whereas the dependent variable includes both home and outside consumption, the price index is based upon the former. Restricting our analysis to home consumption does not alter out findings.
[b] Since the data do not contain price information for meals and snacks consumed outside the home, no price index could be included for this food category.

Table B8: Results regressions of diet diversity incl. pathways and longer term migration (2008/09-2012/13)

	ΔCount (items)	ΔBI (items)	ΔCount (groups)	ΔBI (groups)
Baseline	*11.52*	*0.570*	*7.52*	*0.532*
M^{Rural}	-0.732	-0.006	-0.112	-0.019
	(0.467)	(0.020)	(0.248)	(0.022)
$M^{Rural\ (before\ 2010/11)}$	0.621	0.039	0.225	0.038
	(0.605)	(0.028)	(0.313)	(0.029)
M^{Urban}	-0.933	-0.004	-0.563	-0.037
	(0.726)	(0.030)	(0.361)	(0.029)
$M^{Urban\ (before\ 2010/11)}$	3.321**	0.068	1.197**	0.070
	(1.350)	(0.044)	(0.563)	(0.043)
ΔFarm	0.560	-0.026	-0.063	-0.036**
	(0.383)	(0.016)	(0.185)	(0.016)
ΔLn(Cons. pc)	1.755***	0.061***	0.556***	0.051***
	(0.288)	(0.013)	(0.137)	(0.012)
Const.	-0.845***	-0.052***	-0.148**	-0.040***
	(0.141)	(0.007)	(0.068)	(0.006)
Controls	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓
N	8995	8995	8995	8995
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	0.056	0.002	1.095	0.253

Notes: Based upon food consumption in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B9: Results regressions of changes in body composition diversity incl. pathways and longer term migration (2008/09-2012/13)

	Adults (> 19 years old)			Children (0 to 19 years old)		
	Δ BMI	Δ BMI (women)	Δ BMI (men)	Δ BMI for age z score	Δ BMI for age z score (girls)	Δ BMI for age z score (boys)
Baseline	*21.48*	*21.87*	*20.96*	*-0.332*	*-0.342*	*-0.321*
M^{Rural}	0.249	-0.880	0.639	0.692***	0.720**	0.143
	(0.42)	(-0.52)	(0.48)	(3.11)	(2.27)	(0.24)
$M^{Rural\ (before\ 2010/11)}$	-0.764	1.159	-2.013	-0.691*	-0.732	-0.284
	(-1.10)	(0.65)	(-1.15)	(-1.93)	(-1.57)	(-0.32)
M^{Urban}	1.424*	1.127	2.336	0.175	0.037	0.620*
	(1.72)	(0.70)	(0.68)	(0.71)	(0.08)	(1.67)
$M^{Urban\ (before\ 2010/11)}$	-1.398	-0.021	-3.276	-0.142	-0.229	-0.066
	(-1.33)	(-0.01)	(-0.95)	(-0.28)	(-0.31)	(-0.16)
ΔFarm	-0.044	-0.082	-0.713	-0.147	-0.008	-0.630*
	(-0.14)	(-0.12)	(-0.76)	(-0.73)	(-0.02)	(-1.94)
ΔLn(Cons. pc)	0.346**	0.218	0.450	0.137	0.213	-0.440
	(1.98)	(0.55)	(0.93)	(1.08)	(1.18)	(-1.39)
Const.	-1.396***	-1.264*	-1.101*	-1.057***	-1.136***	-0.345*
	(-4.02)	(-1.93)	(-1.74)	(-8.50)	(-6.20)	(-1.66)
Controls	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓
N	3693	2097	1596	3209	1676	1533
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	1.513	0.773	0.255	2.395	1.561	0.439

Notes: We control for individual baseline characteristics; age, (sex), relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix C: Robustness Checks

Table C1: Results attrition-weighted regressions of changes in food consumption (2008/09-2012/13)

	Δ Total	Δ Maize	Δ Cassava	Δ Other starchy foods	Δ Rice	Δ Bread, pasta, cereal products	Δ Pulses, nuts, seeds	Δ Meat, fish, dairy	Δ Fruits, veg.	Δ Oils, fats	ΔSugar, sweets, pastries	Δ Sodas, tea, coffee	Δ Meals, snacks cons. outs.
Baseline	*2377.53*	*940.76*	*283.76*	*190.37*	*228.31*	*16.61*	*273.76*	*134.39*	*64.96*	*87.90*	*97.27*	*4.82*	*54.92*
M^{Rural}	18.24	-19.67	27.05	15.40	32.66	12.46*	-42.69**	-1.518	-5.670	-2.555	-9.460	2.514	9.724
	(78.60)	(50.00)	(32.43)	(15.77)	(27.90)	(6.512)	(18.99)	(13.83)	(6.895)	(7.011)	(11.05)	(2.414)	(37.73)
M^{Urban}	78.76	-177.7**	-134.6***	-96.23**	98.91**	66.50***	-19.20	15.32	-6.313	-4.460	54.37***	25.13***	257.0***
	(128.6)	(75.03)	(35.60)	(38.69)	(48.25)	(16.57)	(30.94)	(19.17)	(9.542)	(14.73)	(19.25)	(6.398)	(66.58)
Const.	-398.8***	-181.0***	-83.31***	-37.66***	9.030	0.179	-40.79***	-23.62***	-6.878***	-54.77***	-13.00***	0.0733	32.90**
	(25.75)	(15.23)	(8.371)	(6.957)	(8.973)	(1.793)	(5.596)	(3.943)	(2.541)	(2.572)	(3.240)	(1.238)	(16.38)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	9067	9067	9067	9067	9067	9067	9067	9067	9067	9067	9067	9067	9067
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	0.170	3.422*	9.658***	7.710***	1.425	9.440***	0.434	0.483	0.003	0.014	9.173***	10.91***	11.07***

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C2: Results attrition-weighted regressions of changes in diet diversity (2008/09-2012/13)

	Δ Count (items)	Δ BI (items)	Δ Count (groups)	Δ BI (groups)
Baseline	*11.53*	*0.649*	*7.52*	*0.532*
M^{Rural}	-0.421	0.009	-0.042	-0.004
	(0.349)	(0.016)	(0.175)	(0.016)
M^{Urban}	1.177*	0.036	-0.021	-0.009
	(0.657)	(0.023)	(0.291)	(0.023)
Const.	-0.283**	-0.038***	-0.009	-0.031***
	(0.111)	(0.005)	(0.06)	(0.005)
Controls[b]	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓
N	9067	9067	9067	9067
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	4.797**	0.998	0.004	0.037

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C3: Results attrition-weighted regressions of changes in body composition (2008/09-2012/13)

	Adults (> 19 years old)			Children (0 to 19 years old)		
	Δ BMI	Δ BMI (women)	Δ BMI (men)	Δ BMI for age z score	Δ BMI for age z score (girls)	Δ BMI for age z score (boys)
Baseline	*21.47*	*21.87*	*20.95*	*-0.332*	*-0.342*	*-0.320*
M^{Rural}	-0.033	-0.382	-0.163	0.393**	0.448*	-0.163
	(0.388)	(0.953)	(0.977)	(0.190)	(0.269)	(0.575)
M^{Urban}	1.069*	1.165	1.103	0.255	0.306	0.159
	(0.583)	(1.107)	(2.203)	(0.249)	(0.511)	(0.262)
Const.	-1.345***	-1.189**	-1.108*	-1.057***	-1.111***	-0.564***
	(0.337)	(0.605)	(0.602)	(0.110)	(0.173)	(0.167)
Controls	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓
N	3724	2117	1607	3215	1681	1534
F-stat. Ha: $M^{Urban} \neq M^{Rural}$	2.843	1.230	0.309	0.206	0.065	0.256

Notes: We control for individual baseline characteristics; age, (sex), relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C4: Regressions of changes in food consumption[a] using population density measure (2008/09-2012/13)

	Δ Total	Δ Maize	Δ Cassava	Δ Other starchy foods	Δ Rice	Δ Bread, pasta, cereal products	Δ Pulses, nuts, seeds	Δ Meat, fish, dairy	Δ Fruits, veg.	Δ Oils, fats	Δ Sugar, sweets, pastries	Δ Sodas, tea, coffee	Δ Meals, snacks cons. outs.
Baseline	*2376.77*	*939.77*	*284.05*	*190.23*	*228.23*	*16.58*	*273.56*	*134.39*	*64.90*	*87.55*	*97.26*	*4.83*	*55.41*
Pop. Density	0.520	-0.994**	-1.025***	-1.021**	1.167***	0.285**	-0.548***	0.081	-0.098	0.034	0.205	0.129***	2.306***
	(0.806)	(0.404)	(0.265)	(0.409)	(0.373)	(0.111)	(0.175)	(0.110)	(0.066)	(0.117)	(0.140)	(0.040)	(0.644)
Const.	-376.6***	-172.0***	-80.40***	-29.36***	11.11	0.597	-38.08***	-21.55***	-7.818***	-51.98***	-13.38***	-0.223	26.43*
	(25.42)	(14.97)	(8.036)	(7.716)	(8.977)	(1.811)	(5.623)	(3.885)	(2.226)	(2.491)	(3.249)	(1.197)	(16.01)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N	9058	9058	9058	9058	9058	9058	9058	9058	9058	9058	9058	9058	9058

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C5: Regressions of changes in diet diversity using population density measure (2008/09-2012/13)

	Δ Count (items)	Δ BI[a] (items)	Δ Count (groups)	Δ BI[a] (groups)
Baseline	*11.52*	*0.649*	*7.52*	*0.532*
Pop. Density	0.004	0.000	-0.001	-0.000
	(0.006)	(0.000)	(0.003)	(0.000)
Const.	-0.280**	-0.038***	0.003	-0.030***
	(0.111)	(0.005)	(0.055)	(0.005)
Controls	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓
N	9058	9058	9058	9058

Notes: Food consumption is expressed in kcal per capita per day.
We control for individual baseline characteristics; age, sex, relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C6: Regressions of changes in anthropometrics using population density measure (2008/09-2012/13)

	Adults (> 19 years old)			Children (0 to 19 years old)		
	Δ BMI	Δ BMI (women)	Δ BMI (men)	Δ BMI for age z score	Δ BMI for age z score (girls)	Δ BMI for age z score (boys)
Baseline	*21.47*	*21.87*	*20.95*	*-0.332*	*-0.342*	*0.320*
ΔPop. Density	0.010***	0.011*	0.007	0.003	0.005	0.001
	(0.003)	(0.005)	(0.008)	(0.002)	(0.004)	(0.002)
Const.	-1.346***	-1.313**	-1.062*	-1.042***	-1.081***	-0.562***
	(0.326)	(0.594)	(0.585)	(0.111)	(0.175)	(0.147)
Controls	✓	✓	✓	✓	✓	✓
IHHFE	✓	✓	✓	✓	✓	✓
N	3721	2114	1607	3213	1679	1534

Notes: We control for individual baseline characteristics; age, (sex), relation to the household head, education and marital status.
Standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$